REMARKS

The present invention comprises a wireless headset with automatic power control. The wireless headset includes a sensor, a headset circuit, and a power control circuit. The headset circuit interfaces the wireless headset with a base unit, such as a mobile telephone. When the sensor senses a predetermined condition, such as motion, the sensor generates an output signal. The power control circuit activates at least a portion of the headset circuit responsive to the sensor output signal. As long as the sensor output signal remains active, the power control circuit maintains the activation of at least a portion of the headset circuit. However, once the sensor disables the sensor output signal, the power control circuit disables the headset circuit after waiting a predetermined time-out period. Automatic power control as taught and claimed by Applicants eliminates the need for user-activated switches to enable or disable the wireless headset and extends the wireless headset's battery life.

The Examiner rejected claims 1 – 5, 8 – 14, 20 – 26, 29 – 34, and 38 – 41 under 35 U.S.C. §103 as obvious over Yuen (U.S. Patent No. 5,991,645) in view of Hahn (U.S. Patent No. 6,230,029) and Tuoriniemi (U.S. Patent No. 5,978,689). However, not only is there no motivation to combine these references, the combination does not produce the claimed invention.

The cited art does not teach the claimed invention.

Yuen describes a telephone system having an automatic log on/log off system. In particular, a wireless headset interfaces with a base unit over a short-range wireless interface to interface with the telephone system. When a detector in the base unit detects an interruption in the communication between the base unit and the wireless headset, the detector generates an output signal that controls the connection between the base unit and the telephone system. As conceded by the Examiner, nothing in Yuen describes a sensor in the wireless headset that senses a predetermined condition, or a power control circuit that controls the activation of

portions of the headset circuit responsive to a sensor output signal. As such, the wireless headset described by Yuen does not include any type of automatic power control.

Hahn describes a wireless headset system that includes wireless headset, a mobile device, and a base unit. Hahn's wireless headset explicitly uses a user-activated on/off switch (26) to turn the wireless headset on or off. When turned on by the user, the wireless headset communicates over a short-range wireless interface with the base unit, which is electrically connected to the mobile device by a wire interface. The base unit provides the signals from the wireless headset to the mobile device over the wire interface. Like Yuen, the wireless headset of Hahn does not include a sensor or a power control circuit that controls headset circuitry responsive to a sensor output signal. As such, the wireless headset described by Hahn also does not include any type of automatic power control.

Tuoriniemi describes a portable audio and communication system. The system includes a headset that connects to a portable audio/communication device via a cable. The headset includes a user-activated switch 12 that enables a user to selectively switch between an audio mode and a communication mode so that the user can selectively choose to listen to stereo music provided by the portable device or to participate in a phone call via the portable device. Because Tuoriniemi explicitly describes that the headset only interfaces with the portable device via a cable, the Tuoriniemi invention is completely unrelated to wireless headset systems. Further, Tuoriniemi explicitly discloses that the user controls the selective aspects of the headset control. As such, nothing in Tuoriniemi describes any type of automatic power control.

In summary, it is clear that the cited references, whether taken alone or in combination, describe a wireless headset that includes the sensor and power control circuit required by claim 1. In particular, none of the references teach or suggest "a sensor for asserting a sensor output signal in response to sensing a predetermined condition; and a power control circuit adapted to activate at least a portion of said headset circuit in response to said sensor output signal." For

at least this reason, independent claim 1, and dependent claims 2 – 12, are patentably distinct from the cited art.

Independent claim 13 also claims a wireless headset that includes a sensor and a power control circuit similar to that of claim 1. In particular, the wireless headset of claim 13 includes "a sensor for asserting a sensor output signal in response to sensing a predetermined condition; and a power control circuit operatively associated with said sensor and said headset circuit" for controlling the headset circuit responsive to the sensor output signal. Therefore for substantially the same reasons provided above, independent claim 13 and dependent claims 14 – 23 are also patentably distinct from the cited art. In addition, the power control circuit of claim 13 controls at least three different states (active, inactive, and sleep) of the headset circuit responsive to the sensor output signal. Because none of the cited references teach or suggest controlling at least three different headset circuit operational states, independent claim 13 and dependent claims 14 – 23 are patentably distinct from the cited art.

Independent method claims 24 and 33 both claim the steps of "detecting a predetermined condition via a sensor disposed in the wireless headset and associated with said control circuit" and enabling at least a portion of the communications circuit in response to detecting the predetermined condition. Applicants amended both claims to clarify that the sensor is in the wireless headset. Because none of the cited references, alone or in combination, teach or suggest these claimed limitations, as discussed above, independent claims 24 and 33, and dependent claims 25 – 32 and 34 – 41 are patentably distinct from the cited art.

<u>There is no motivation to combine the cited art.</u>

In addition to the above remarks, Applicants note that there is also no motivation to combine the references. Nothing in the cited art or in the knowledge of one skilled in the art suggests that it would be obvious to combine the automatic log on/log off wireless headset

system of Yuen with the wireless headset system of Hahn or the wired headset system of Tuoriniemi. The fact that each reference teaches a headset that interfaces with a base unit does not represent sufficient motivation for the combination.

Further, Applicants note that the Examiner does not even offer any motivation. Instead, the Examiner simply asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Tuoriniemi to the modified system of Hahn and Yuen in order to allow a user of a handset free the flexibility to listen an audio program while being able to receive telephone calls at the same time." First, nothing in the proffered motivation offers any explanation as to why it would be obvious to combine Hahn with Yuen. Second, nothing in the proffered motivation applies in any way to the present invention. The Examiner appears to be stating that it would be obvious to make the headset system of Tuoriniemi a wireless headset system. However, this motivation has no relevance to the claims of the present invention. As such, the Examiner's obviousness rejection is legally insufficient and must be withdrawn.

The cited art does not teach the limitations of dependent claims 2, 3, 10 – 12, 23, 26, 30 – 32, and 39 – 41.

Because the independent claims are non-obvious in view of the cited art, the dependent claims are also necessarily non-obvious. However, Applicants also note that at least claims 10 – 12, 23, 30 – 32, and 39 – 41, which further claim the predetermined condition sensed by the sensor, are also patentably distinct. Contrary to the Examiner's assertions, Yuen only describes a detector in a base unit that detects signal interruptions between the wireless headset and the base unit. See at least Figures 3 – 8, column 2, lines 52 – 57, column 7, lines 8 – 17. Generally, these interruptions occur when the wireless headset is out of range of the base unit (column 12, lines 42 – 56). As such, Yuen does not teach or suggest a sensor that detects a proximity between the wireless headset and the user (claims 10, 23, 31 and 40), an attitude

sensor that detects an orientation of the wireless headset (claims 12, 30, and 39), or a sensor that detects contact between the user's body and the wireless headset (claims 11, 32, and 41). As such, claims 10 – 12, 23, 30 – 32, and 39 – 41 are also patentably distinct from the cited art.

Further, dependent claims 2 – 3 and 26 are also patentably distinct. These claims require the power control circuit to activate different elements within the headset circuit responsive to the sensor output signal. Nothing in Yuen, Hahn, or Tuoriniemi teach or suggest activating different parts of a headset circuit at different times responsive to a sensor output signal. As such, claims 2 – 3 and 26 are also patentably distinct from the cited art.

Conclusion

In light of the arguments presented above, Applicants submit that claims 1 – 41 are in condition for allowance. As such, Applicants respectfully request that the Examiner reconsider the rejections and allow the application to move forward to allowance. Should any issues remain unresolved, Applicants request that the Examiner call the undersigned so that such issues may be resolved expeditiously.

Respectfully submitted,

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